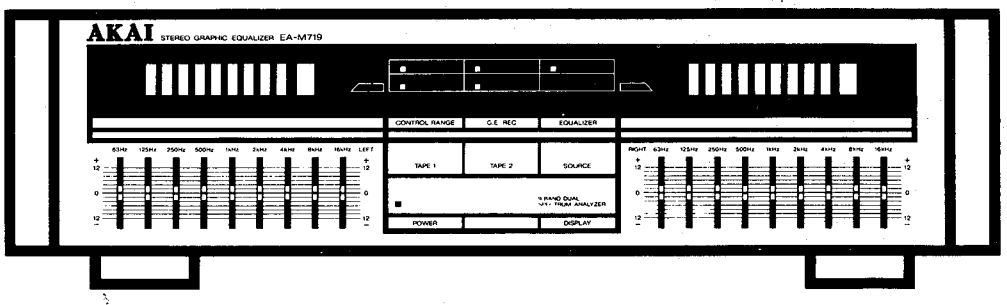
AKAI SERVICE MANUAL



STEREO GRAPHIC EQUALIZER

MODEL EA-M719

SPECIFICATIONS

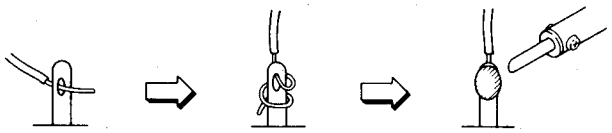
System	9 band Stereo Graphic Equalizer	Input Sensitivity	
Control Center Frequency	63 Hz, 125 Hz, 250 Hz, 500 Hz, 1 kHz, 2 kHz, 4 kHz, 8 kHz, 16 kHz	SOURCE IN	150 mV/47 K ohms
		TAPE PLAY	150 mV/47 K ohms
Control Range	±12 dB/±6 dB	Output	
Total Harmonic Distrotion.	0.003% (1 kHz, 1V Output)	SOURCE OUT	150 mV/100 ohms
Gain	0 dB (when level control is 0 dB)	TAPE REC	150 mV/100 ohms
Frequency Response	10 Hz to 100 kHz (+0 dB, −2 dB)	Power Requirement	AC 220V, 50 Hz for Europe Except UK AC 240V, 50 Hz for UK
S/N Ratio	105 dB (IHF-A, 1V Output).		
Channel Separation	60 dB (1 kHz, 150 m Input)	Dimension	385 (W) x 98.5 (H) x 330 (D) mm
Maximum Input Level	6V (1 kHz, T.H.D = 0.02%)	Weight	4.4 kg

* For improvement purposes, specifications and design are subject to change without notice.

★SAFETY INSTRUCTIONS

PRECAUTIONS DURING SERVICING

1. Parts identified by the ⚠ symbol parts are critical for safety. Replace only with parts number specified.
2. In addition to safety, other parts and assemblies are specified for conformance with such regulations as those applying to spurious radiation.
   These must also be replaced only with specified replacements.
   Examples: RF converters, tuner units, antenna selector switches, RF cables, noise blocking capacitors, noise blocking filters, etc.
3. Use specified internal wiring. Note especially:
   1) Wires covered with PVC tubing
   2) Double insulated wires
   3) High voltage leads
4. Use specified insulating materials for hazardous live parts. Note especially:
   1) Insulation Tape
   2) PVC tubing
   3) Spacers (Insulating Barriers)
   4) Insulation sheets for transistors
   5) Plastic screws for fixing microswitch (especially in turntable)
5. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.), wrap ends of wires securely about the terminals before soldering.



6. Observe that wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.).
7. Check that replaced wires do not contact sharp edged or pointed parts.
8. Also check areas surrounding repaired locatoins.
9. Use care that foreign objects (screws, solder droplets, etc.) do not remain inside the set.

SAFETY CHECK AFTER SERVICING

Confirm the specified insulation resistance between power cord plug prongs and externally exposed parts of the set is greater than 10 M ohms. but for equipment with external antenna terminals (tuner, receiver, etc.) and is intended for [C] or [A], specified insulation resistance should be headphone jacks line-in-out jacks etc. more than 2.2 M ohms (ground terminals, microphone jacks).

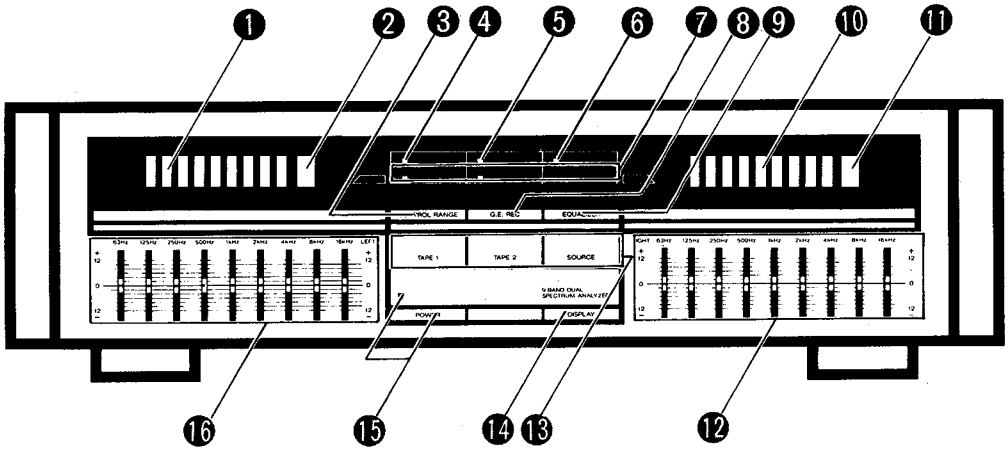
★INFORMATION

SYMBOLS FOR PRIMARY DESTINATION

Alphabet indicates the destination of the units as listed below.

Symbols	Principal Destinations
[A]	USA
[B]	UK
[C]	Canada
[E]	Europe (except UK)
[J]	Japan
[S]	Australia
[V]	W. Germany only
[U]	Universal Area
[Y*]	Custom version

I. CONTROLS



1 LEFT channel spectrum display
This is a fluorescent display which displays the levels of the left channel signals for the various frequencies during playback.

2 F. RANGE (full range) display
This displays the overall level of the left channel signals during playback.

3 CONTROL RANGE indicator
This indicator is either red or green to indicate the setting of the control range switch.

4 CONTROL RANGE (±12 dB (green)/±6 dB (red)) switch
Use this switch to change the control range of the frequency level controls.
When set to ±12 dB, the CONTROL RANGE indicator will be green, and when set to ±6 dB, the indicator will be red.

5 G. E. REC (graphic equalizer record) indicator
This lights to indicate that the G. E. REC switch is on.

6 EQUALIZER indicator
This lights to indicate that the EQUALIZER switch is on.

7 Input Select Indicators (TAPE 1/TAPE 2/SOURCE)
These light to indicate which of the input select buttons (TAPE 1/TAPE 2/SOURCE) has been selected.

8 G. E. REC (graphic equalizer record) switch
Press this switch to record onto the cassette deck connected to the graphic equalizer with the effect set by the frequency level controls. When pressed, the G. E. REC indicator will light. Press again to turn the switch off. The indicator will turn off.

9 EQUALIZER switch
Press this switch to apply the effect set using the frequency level controls to the playback signals.
Press again to turn the switch off. When on, the EQUALIZER indicator will light.

10 RIGHT channel spectrum display
This is a fluorescent display which displays the levels of the right channel signals for the various frequencies during playback.

11 F. RANGE (full range) display
This displays the overall level of the right channel signals during playback.

12 RIGHT channel frequency level controls
Use these controls to adjust the level for the indicated frequencies.
When moved to the "+" side, the level increases, and when moved to the "—" side, the level decreases.
When set at "0", the effect will be the same as when the EQUALIZER switch is off.

13 Input select buttons (TAPE 1/TAPE 2/SOURCE)
Use these buttons to select the source to which you want to apply the equalizer effect or which you want to record. The indicator for the button which is pressed will light.

14 DISPLAY switch
Use this switch to turn off the left and right channel spectrum and full range displays. (The display's level indicators remain lit even when the display of the signal levels is turned off.)

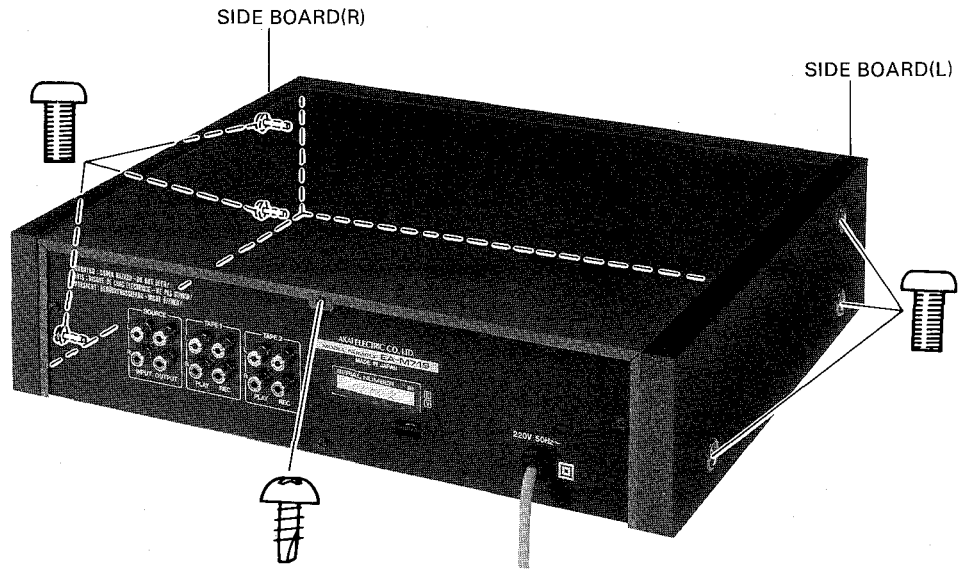
15 POWER switch and indicator
Use this switch to turn the graphic equalizer power on and off.

16 LEFT channel frequency level controls
Use these controls to adjust the level for the indicated frequencies.
When moved to the "+" side, the level increases, and when moved to the "—" side, the level decreases.
When set at "0", the effect will be the same as when the EQUALIZER switch is off.

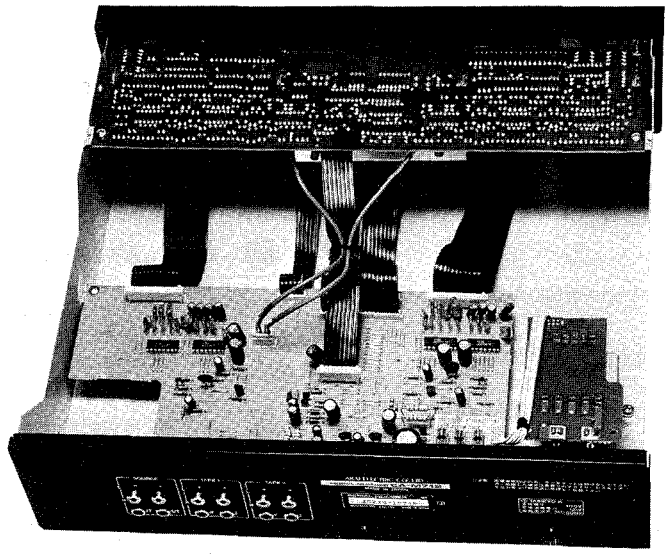
II. DISASSEMBLY

In case of trouble, etc, necessitating dismantling, please dismantle in the order shown in the photographs.
Reassemble in reverse order.

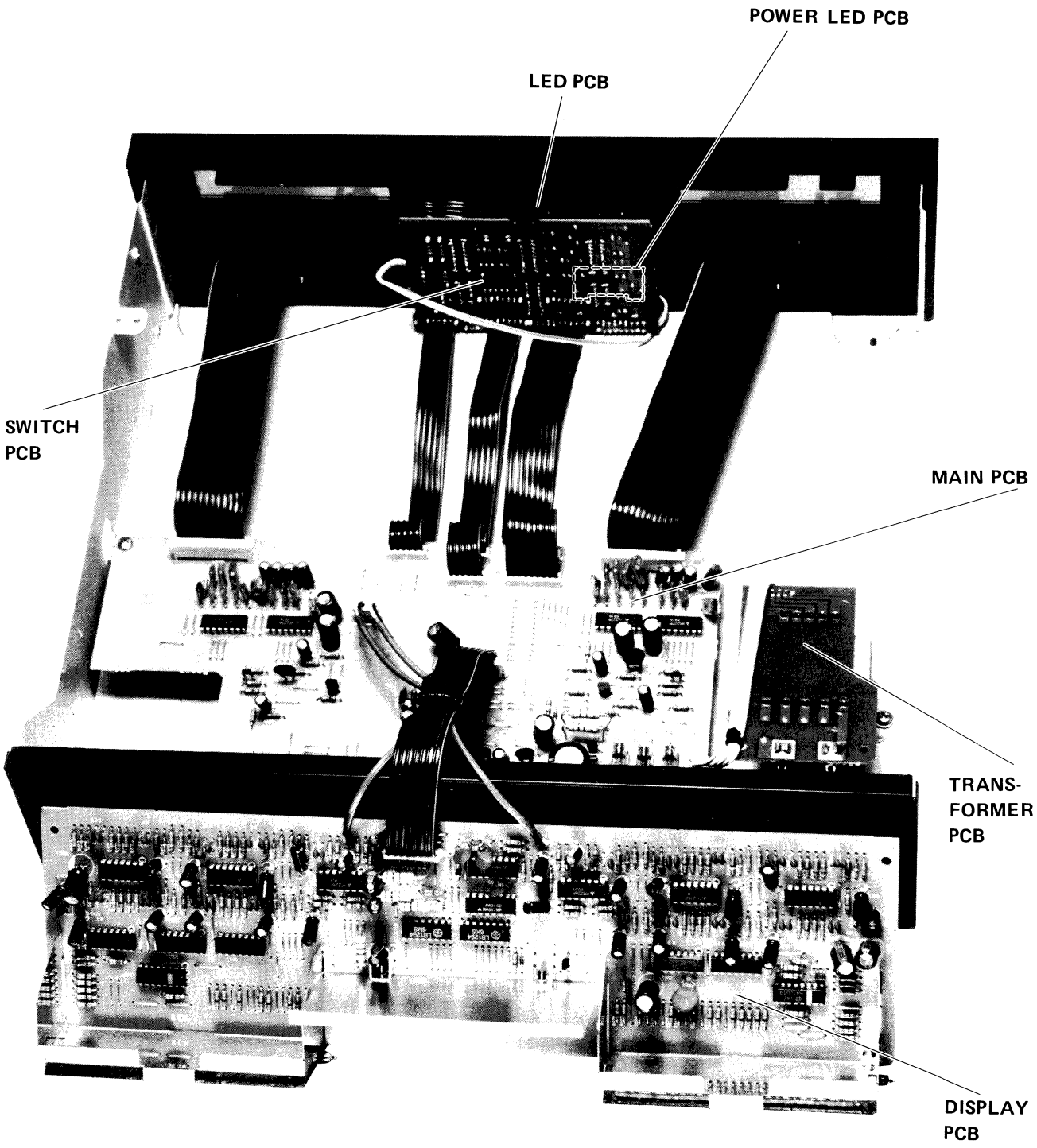
1 REMOVAL OF SIDE BOARDS AND UPPER COVER



2



III. PRINCIPAL PARTS LOCATION



IV. PARTS LIST

ATTENTION

1. When placing an order for parts, be sure to list Part No., Model No. and the description of each part. Otherwise, the non-delivery of the part or the delivery of a wrong part may result.
2. Please make sure that Part No. is correct when ordering.
   If not, a part different from the one you ordered may be delivered.
3. Since the parts shown in Parts List of Preliminary Service Manual may have been the subject of changes, please use this Parts List for all future reference.

HOW TO USE THIS PARTS LIST

1. This Parts List lists those parts which are considered necessary for repairs. Other common parts, such as resistors and capacitors, are listed in the "Common List for Service Parts" from which these parts should be selected and stocked.
2. The Recommended Spare Parts List shows those parts in the Parts List which are considered particularly important for service.
3. Parts not shown in the Parts List and "Common List for Service Parts" will not in principle be supplied.
4. How to read the Parts List.

a) Mechanism Block

2. HEAD BASE BLOCK

REF. NO.	PART NO.	DESCRIPTION
2-1x	BH-T2023A320A	HEAD BASE BLOCK
2-2	HP-H2206A010A	HEAD R/P PR4-8FU C
2-3	ZS-477876	PAN20×03STL CMT
2-4	ZS-536488	BID20×08STL CMT
2-5	ZG-402895	SP CS ANGLE ADJUST

- SP (Service Parts) Classification
- A small "x" indicates that this part is not shown in the Photo or Illustration.
- This number corresponds with the individual parts index number in that figure.
- This number corresponds with the Figure Number.

b) PC Board

6. MAIN PC BOARD

REF. NO.	PART NO.	DESCRIPTION
6-IC1	EI-324536	IC HD14049BP
6-IC2	EI-336801	IC MB8841-564M
6-C1A	EC-338399	C MMY V 223M 250AC [U,E,B,S]
6-C1B	EC-350949	C MMY V 223M 250DC [J]
6-C1C	EC-338397	C MMY V 223M 125AC [C,A]
6-X1	EI-318384	OSC X'TAL NC-18C

- Symbols for primary destination
  [A]: AAL(U.S.A.) [S]: SAA(Australia)
  [B]: BEAB(England) [U]: U/T(Universal Area)
  [C]: CSA(Canada) [V]: VDE(W. Germany)
  [E]: CEE(Europe) [Y]: Custom Version
  [J]: JPN(Japan)
- SP (Service Parts) Classification
- These reference symbols correspond with component symbols in the Schematic Diagrams.

The available PC Board Blocks are listed separately.

5. When Part No. is known, Parts Index at end of Parts List can be used to locate where that part is shown in Parts List by its Reference No. listed at right of Part No.

WARNING

⚠ (*) INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURE'S RECOMMENDED PARTS.

AVERTISSEMENT

⚠ (*) IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÉCES RECOMMANDEES PAR LE FABRICANT.

1. RECOMMENDED SPARE PARTS

We suggest you to stock the following Recommended Spare Part items listed below since they can cover most of the routine service.

Ref. No.	Part No.	Description
1	*BT-719698	TRANS POWER PPT-049 (J)
2	*BT-719699	TRANS POWER PPT-050 (E,V)
3	*BT-719700	TRANS POWER PPT-051 (B,S)
4	*BT-719701	TRANS POWER PPT-052 (U)
5	ED-370976	D LED SLB-22PW3
6	ED-719766	D LED SLR-54MW3F
7	ED-719716	D LED SPR-54MVWF
8	ED-712568	D SILICON DSF10B
9	ED-307572	D SILICON H 1SS131
10	ED-624903	D SILICON H 1S2473
11	ED-719715	D ZENER H GZA11 X
12	ED-710997	D ZENER H GZA16 Y
13	ED-708046	D ZENER H GZA5.1 Y
14	ED-710974	D ZENER H GZA8.2 Y
15	*EF-300598	FUSE FST3100 T 250V 315MA [E,B,S]
16	*EF-300599	FUSE FST3100 T 250V 400MA [J,U]
17	*EF-306125	FUSE TSC A 250V 315MA [J,U]
18	*EF-309389	FUSE TSC A 250V 400MA [J,U]
19	EI-315799	IC HA12019
20	EI-343417	IC LB1294
21	EI-355211	IC M5227P
22	EI-719710	IC M5228P
23	EI-337324	IC TC4016BP
24	EI-709342	IC TC4017BP
25	EI-306726	IC TC4069UBP
26	EM-373271	IND FL BG-139ZSK
27	ES-719719	SW PUSH SPEC12 2-02
28	ES-719718	SW PUSH SPEC12 6-02
29	ES-719720	SW PUSH SPEC32 3 THROW
30	*ES-709333	SW SELECTOR HXW-0103-01-610
31	ET-719714	TR DTC363ES
32	ET-709752	TR 2SA1175 J,H,F,E
33	ET-322598	TR 2SB632K E,F
34	ET-709750	TR 2SC2785 J.H.F
35	ET-338410	TR 2SC2878 A,B
36	ET-712566	TR 2SD1020 H,F
37	ET-310148	TR 2SD612K E,F
38	EV-719765	VR SLIDE VJK2018N(9R) 104 4BM

2. MAIN P.C BOARD

Ref. No.	Part No.	Description
D601	*ED-712568	D SILICON DSF10B
D602	*ED-712568	D SILICON DSF10B
D603	*ED-712568	D SILICON DSF10B
D604	*ED-712568	D SILICON DSF10B
D605	*ED-710997	D ZENER H GZA16 Y
D606	*ED-710997	D ZENER H GZA16 Y
D607	ED-712568	D SILICON DSF10B
D608	ED-710974	D ZENER H GZA8.2 Y
D609	ED-712568	D SILICON DSF10B
D610	ED-712568	D SILICON DSF10B
D612	*ED-708046	D ZENER H GZA5.1 Y
F601	*EF-306125	FUSE TSC A 250V 315MA [J,U]
F601A	*EF-695766	FUSE SEMKO T 250V 315MA [E,B,S]
F602	*EF-306125	FUSE TSC A 250V 315MA [J,U]
F602A	*EF-695766	FUSE SEMKO T 250V 315MA [E,B,S]
F603	*EF-309389	FUSE TSC A 250V 400MA [J,U]
F603A	*EF-668474	FUSE SEMKO T 250V 400MA [E,B,S]
IC101	EI-355211	IC M5227P
IC102	EI-355211	IC M5227P
IC201	EI-355211	IC M5227P
IC202	EI-355211	IC M5227P
Q101	ET-338410	TR 2SC2878 A,B
Q102	ET-338410	TR 2SC2878 A,B
Q601	ET-709752	TR 2SA1175 J,H,F,E
Q602	ET-709750	TR 2SC2785 J.H.F
Q603	*ET-310148	TR 2SD612K E,F
Q604	*ET-322598	TR 2SB632K E,F
Q605	*ET-712566	TR 2SD1020 H,F
Q606	*ET-712566	TR 2SD1020 H,F
R615	*ER-321192	R OMF H S20 FS 2W 101J
R616	*ER-321192	R OMF H S20 FS 2W 101J
R622	*ER-321192	R OMF H S20 FS 2W 101J
R623	*ER-321192	R OMF H S20 FS 2W 101J
J1	EJ-719721	PIN J T5857-FA 4P
J2	EJ-719721	PIN J T5857-FA 4P
J3	EJ-719721	PIN J T5857-FA 4P

3. DISPLAY P.C BOARD

Ref. No.	Part No.	Description
D301	ED-624903	D SILICON H 1S2473
D302	ED-624903	D SILICON H 1S2473
D303	ED-624903	D SILICON H 1S2473
D304	ED-624903	D SILICON H 1S2473
D305	ED-624903	D SILICON H 1S2473
D306	ED-624903	D SILICON H 1S2473
D307	ED-624903	D SILICON H 1S2473
D308	ED-624903	D SILICON H 1S2473
D309	ED-624903	D SILICON H 1S2473
D310	ED-624903	D SILICON H 1S2473
D401	ED-624903	D SILICON H 1S2473
D402	ED-624903	D SILICON H 1S2473
D403	ED-624903	D SILICON H 1S2473
D404	ED-624903	D SILICON H 1S2473
D405	ED-624903	D SILICON H 1S2473
D406	ED-624903	D SILICON H 1S2473
D407	ED-624903	D SILICON H 1S2473
D408	ED-624903	D SILICON H 1S2473
D409	ED-624903	D SILICON H 1S2473
D410	ED-307572	D SILICON H 1SS131
D501	*ED-719715	D ZENER H GZA11 X
D502	ED-624903	D SILICON H 1S2473
IC301	EI-719710	IC M5228P
IC302	EI-719710	IC M5228P
IC303	EI-719710	IC M5228P
IC401	EI-719710	IC M5228P
IC402	EI-719710	IC M5228P
IC403	EI-719710	IC M5228P
IC501	EI-306726	IC TC4069UBP
IC502	EI-709342	IC TC4017BP
IC503	EI-337324	IC TC4016BP
IC504	EI-337324	IC TC4016BP
IC505	EI-337324	IC TC4016BP
IC506	EI-337324	IC TC4016BP
IC507	EI-337324	IC TC4016BP
IC508	EI-315799	IC HA12019
IC509	EI-343417	IC LB1294
IC510	EI-343417	IC LB1294
IC511	EI-315799	IC HA12019
IN1	EM-373271	IND FL BG-139ZSK
IN2	EM-373271	IND FL BG-139ZSK
Q501	ET-719714	TR DTC363ES

Ref. No.	Part No.	Description
Q502	ET-719714	TR DTC363ES
Q503	ET-709750	TR 2SC2785 J.H.F
R503	*ER-305722	R OMF H S20 FS 2W 221J
R613	*ER-321192	R OMF H S20 FS 2W 101J
R614	*ER-321192	R OMF H S20 FS 2W 101J
R628	*ER-321192	R OMF H S20 FS 2W 101J

4. TRANS P.C BOARD

Ref. No.	Part No.	Description
T601	*BT-719698	TRANS POWER PPT-049 (J) [J]
T601A	*BT-719701	TRANS POWER PPT-052 (U) [U]
T601B	*BT-719699	TRANS POWER PPT-050 (E,V) [E,V]
T601C	*BT-719700	TRANS POWER PPT-051 (B,S) [B,S]

5. SWITCH P.C BOARD

Ref. No.	Part No.	Description
S101	ES-719718	SW PUSH SPEC12 6-02 [POWER]
S102	ES-719719	SW PUSH SPEC12 2-02 [DISPLAY]
S103	ES-719720	SW PUSH SPEC32 3 THROW [TAPE1,TAPE2,SOURCE]
S106	ES-719718	SW PUSH SPEC12 6-02 [CONTROL RANGE]
S107	ES-719718	SW PUSH SPEC12 6-02 [G.E REC]
S108	ES-719718	SW PUSH SPEC12 6-02 [EQ]

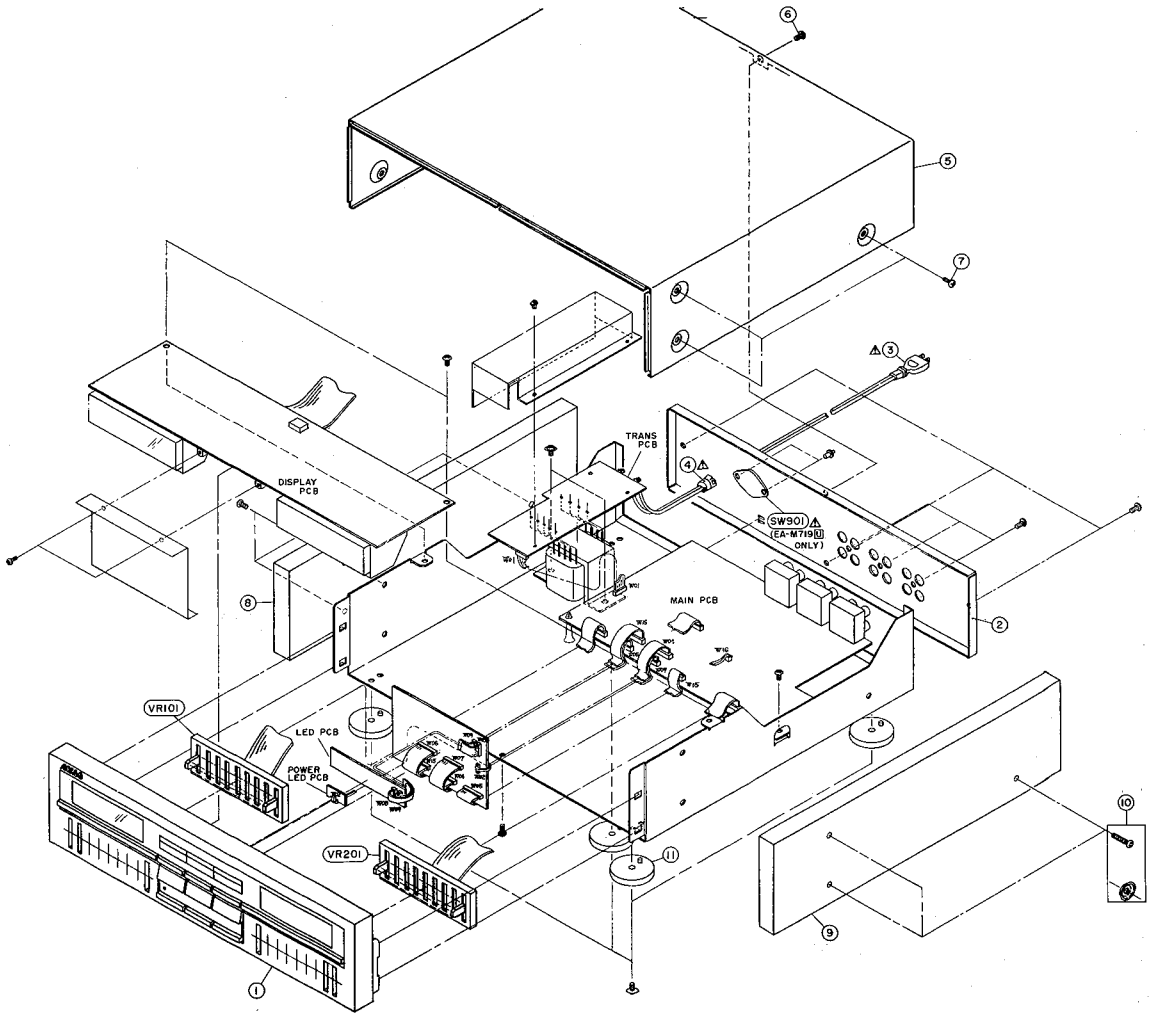
6. LED P.C BOARD

Ref. No.	Part No.	Description
D610	ED-719716	D LED SPR-54MVWF
D612	ED-719766	D LED SLR-54MW3F
D613	ED-719766	D LED SLR-54MW3F
D614	ED-719766	D LED SLR-54MW3F
D615	ED-719766	D LED SLR-54MW3F
D616	ED-719766	D LED SLR-54MW3F

7. POWER LED P.C BOARD

Ref. No.	Part No.	Description
D611	ED-370976	D LED SLB-22PW3 [POWER]

FINAL ASSEMBLY BLOCK



8. FINAL ASSEMBLY BLOCK

Ref. No.	Part No.	Description
1B-G	BD-719764	PANEL FRONT BLK EA-M719-G
1B-B	BD-719762	PANEL FRONT BLK EA-M719-B
2B	SP-719703	PANEL REAR EM-M719 (J) [J]
2C	SP-719707	PANEL REAR EA-M719 (U) [U]
2D	SP-719705	PANEL REAR EA-M719 (E,V) [E,V]
2E	SP-719704	PANEL REAR EA-M719 (B,S) [B,S]
3	*EW-372045	AC CORD 200 KP211VFF B070 AJ [J]
3A	*EW-306428	AC CORD 2C KP-700A,VFF U/T [U]
3B	*EW-336923	AC CORD 2C KP-419C,LTCE-2F EV [E]
3C	*EW-347024	AC CORD LTBS-2F 42/0.15X2 B [B]
3D	*EW-336924	AC CORD 2C KP-560,LTSA-2F S [S]
4	*EZ-345815	STOPPER CORD CM-22A [J,U]
4A	*EZ-345816	STOPPER CORD CM-22B [E,V,B,S]
5-B	SP-719692	COVER UPPER EA-M719-B
5-G	SP-719693	COVER UPPER EA-M719-G
6-B	ZS-463353	T2BR30X08STL BNI
6-G	ZS-336351	T2BR30X08STL NI3
8	SP-719767	SIDE BOARD (L) EA-M719
9	SP-719768	SIDE BOARD (R) EA-M719
10	ZS-365678	SCREW SLIDE TYPE W/WASHER(J)
11	SA-B370709	FOOT PART
VR101	EV-719765	VR SLIDE VJK2018N(9R) 104 4BM
VR201	EV-719765	VR SLIDE VJK2018N(9R) 104 4BM
SW901	*ES-709333	SW SELECTOR HXW-0103-01-610 [U] [VOLTAGE SELECTOR]

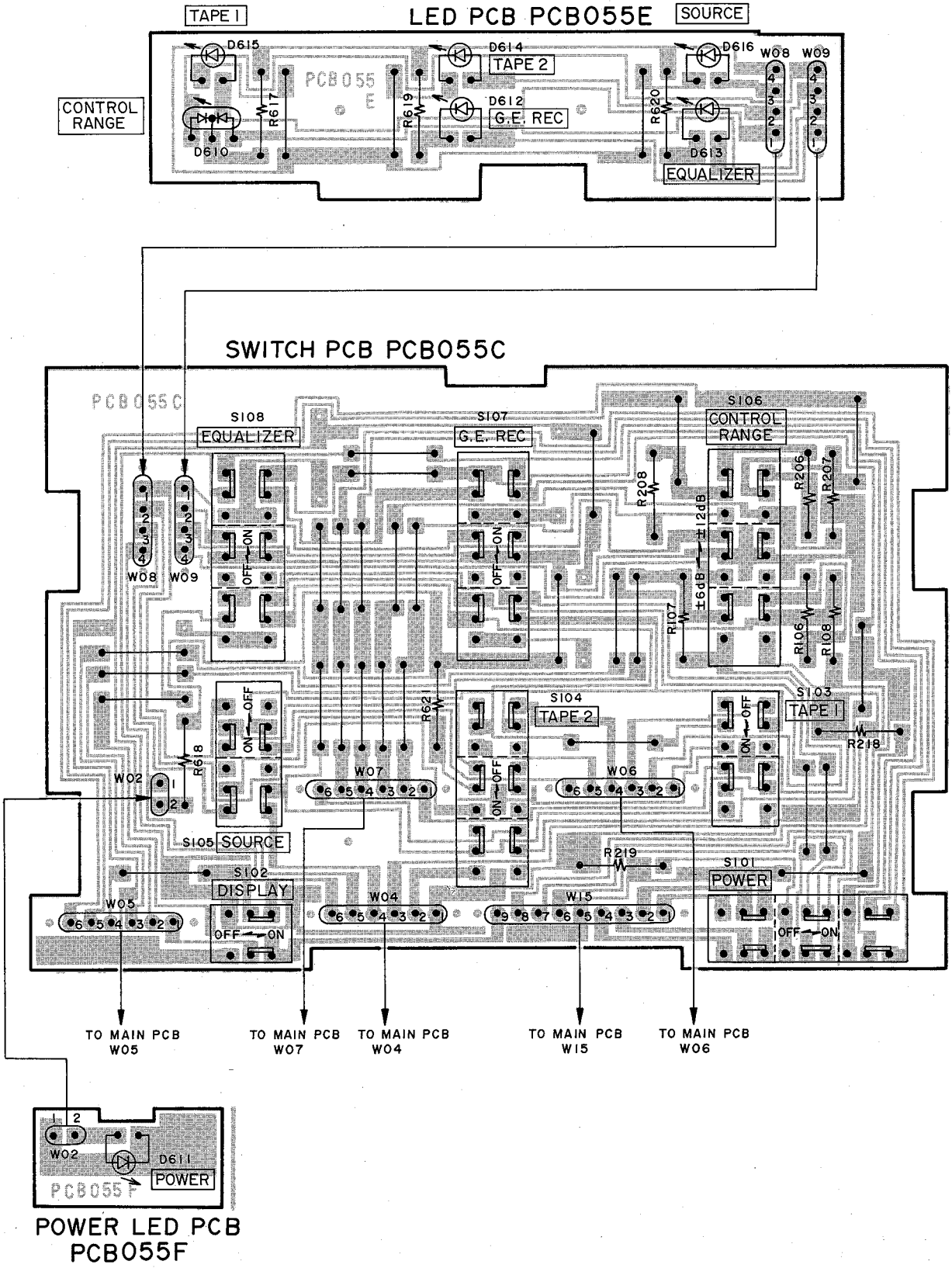
INDEX

Part No.	Ref. No.	Part No.	Ref. No.	Part No.	Ref. No.	Part No.	Ref. No.
BD-719762	1B-B	EI-337324	IC507	ZS-336351	6-G		
BD-719764	1B-G	EI-343417	20	ZS-365678	10		
BT-719698	1	EI-343417	IC509	ZS-463353	6-B		
BT-719698	T601	EI-343417	IC510				
BT-719699	2	EI-355211	21				
BT-719699	T601B	EI-355211	IC101				
BT-719700	3	EI-355211	IC102				
BT-719700	T601C	EI-355211	IC201				
BT-719701	4	EI-355211	IC202				
BT-719701	T601A	EI-709342	24				
ED-307572	9	EI-709342	IC502				
ED-307572	D410	EI-719710	22				
ED-370976	5	EI-719710	IC301				
ED-370976	D611	EI-719710	IC302				
ED-624903	10	EI-719710	IC303				
ED-624903	D301	EI-719710	IC401				
ED-624903	D302	EI-719710	IC402				
ED-624903	D303	EI-719710	IC403				
ED-624903	D304	EJ-719721	J1				
ED-624903	D305	EJ-719721	J2				
ED-624903	D306	EJ-719721	J3				
ED-624903	D307	EM-373271	26				
ED-624903	D308	EM-373271	IN1				
ED-624903	D309	EM-373271	IN2				
ED-624903	D310	ER-305722	R503				
ED-624903	D401	ER-321192	R615				
ED-624903	D402	ER-321192	R616				
ED-624903	D403	ER-321192	R622				
ED-624903	D404	ER-321192	R623				
ED-624903	D405	ER-321192	R613				
ED-624903	D406	ER-321192	R614				
ED-624903	D407	ER-321192	R628				
ED-624903	D408	ES-709333	30				
ED-624903	D409	ES-709333	SW901				
ED-624903	D502	ES-719718	28				
ED-708046	13	ES-719718	S101				
ED-708046	D612	ES-719718	S106				
ED-710974	14	ES-719718	S107				
ED-710974	D608	ES-719718	S108				
ED-710997	12	ES-719719	27				
ED-710997	D605	ES-719719	S102				
ED-710997	D606	ES-719720	29				
ED-712568	8	ES-719720	S103				
ED-712568	D601	ET-310148	37				
ED-712568	D602	ET-310148	Q603				
ED-712568	D603	ET-322598	33				
ED-712568	D604	ET-322598	Q604				
ED-712568	D607	ET-338410	35				
ED-712568	D609	ET-338410	Q101				
ED-712568	D610	ET-338410	Q102				
ED-719715	11	ET-709750	34				
ED-719715	D501	ET-709750	Q602				
ED-719716	7	ET-709750	Q503				
ED-719716	D610	ET-709752	32				
ED-719766	6	ET-709752	Q601				
ED-719766	D612	ET-712566	36				
ED-719766	D613	ET-712566	Q605				
ED-719766	D614	ET-712566	Q606				
ED-719766	D615	ET-719714	31				
ED-719766	D616	ET-719714	Q501				
EF-300598	15	ET-719714	Q502				
EF-300599	16	EV-719765	38				
EF-306125	17	EV-719765	VR101				
EF-306125	F601	EV-719765	VR201				
EF-306125	F602	EW-306428	3A				
EF-309389	18	EW-336923	3B				
EF-309389	F603	EW-336924	3D				
EF-668474	F603A	EW-347024	3C				
EF-695766	F601A	EW-372045	3				
EF-695766	F602A	EZ-345815	4				
EI-306726	25	EZ-345816	4A				
EI-306726	IC501	SA-B370709	11				
EI-315799	19	SP-719692	5-B				
EI-315799	IC508	SP-719693	5-G				
EI-315799	IC511	SP-719703	2B				
EI-337324	23	SP-719704	2E				
EI-337324	IC503	SP-719705	2D				
EI-337324	IC504	SP-719707	2C				
EI-337324	IC505	SP-719767	8				
EI-337324	IC506	SP-719768	9				

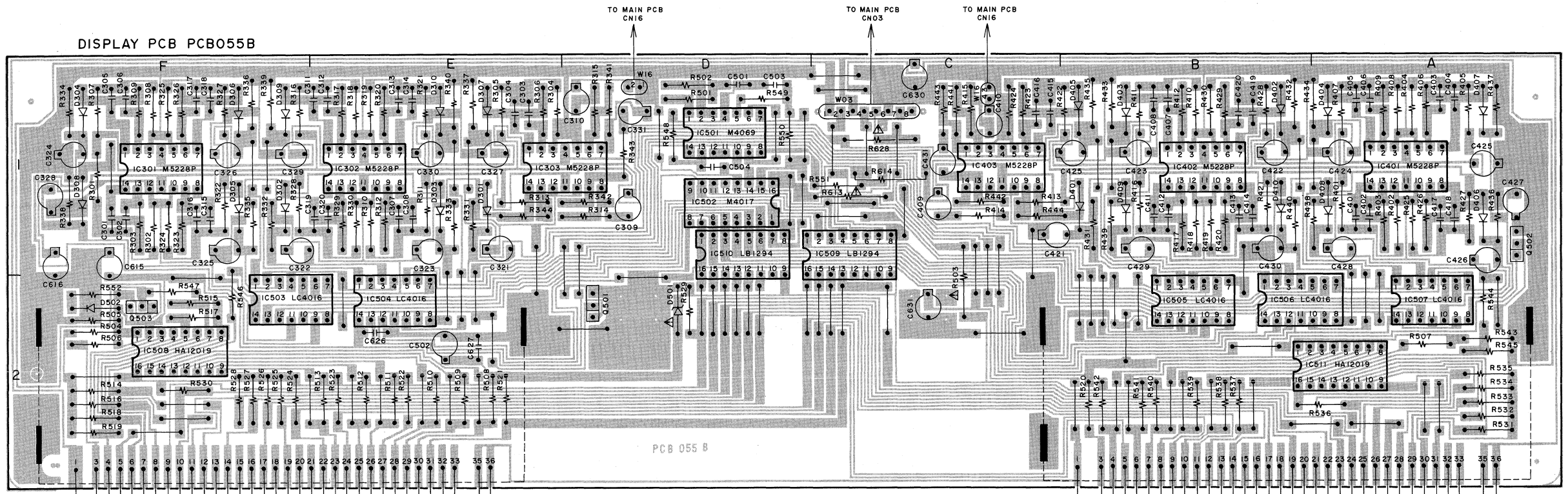
AKAI

MODEL EA-M719

SCHEMATIC DIAGRAM
AND PC BOARDS


LED PCB PCB055E
TAPE 1
SOURCE
D615
D614
TAPE 2
D616
W08
W09
PCB055 E
CONTROL RANGE
R617
R619
D612
G.E. REC
R620
D610
D613
EQUALIZER
SWITCH PCB PCB055C
PCB055C
S108
EQUALIZER
S107
G.E. REC
S106
CONTROL RANGE
R208
R206
R207
±12dB
±6dB
R107
R106
R108
W08
W09
OFF ON
S104
TAPE 2
S103
TAPE 1
R621
R218
R618
W02
W07
W06
S105
SOURCE
R219
S102
DISPLAY
S101
POWER
W05
W04
W15
OFF ON
TO MAIN PCB W05
TO MAIN PCB W07
TO MAIN PCB W04
TO MAIN PCB W15
TO MAIN PCB W06
W02
D611
POWER
PCB055F
POWER LED PCB PCB055F

DISPLAY PCB PCB055B



LEFT CHANNEL SPECTRUM DISPLAY

RIGHT CHANNEL SPECTRUM DISPLAY

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

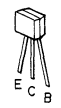
AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

LOCATION OF COMPONENTS

IC301 ···· F1
IC302 ···· E1
IC303 ···· E1
IC401 ···· A1
IC402 ···· B1
IC403 ···· C1
IC501 ···· D1
IC502 ···· D1
IC503 ···· F2
IC504 ···· E2
IC505 ···· B2
IC506 ···· B2
IC507 ···· A1
IC508 ···· F2
IC509 ···· C1
IC510 ···· D1
IC511 ···· A2
Q501 ····· D2
Q502 ····· A1
Q503 ····· F2

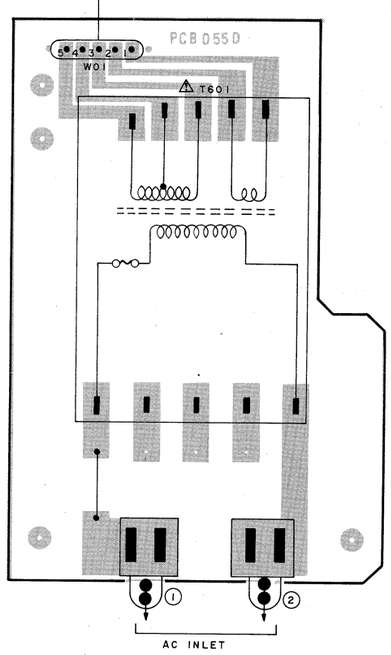
= TRANSISTOR

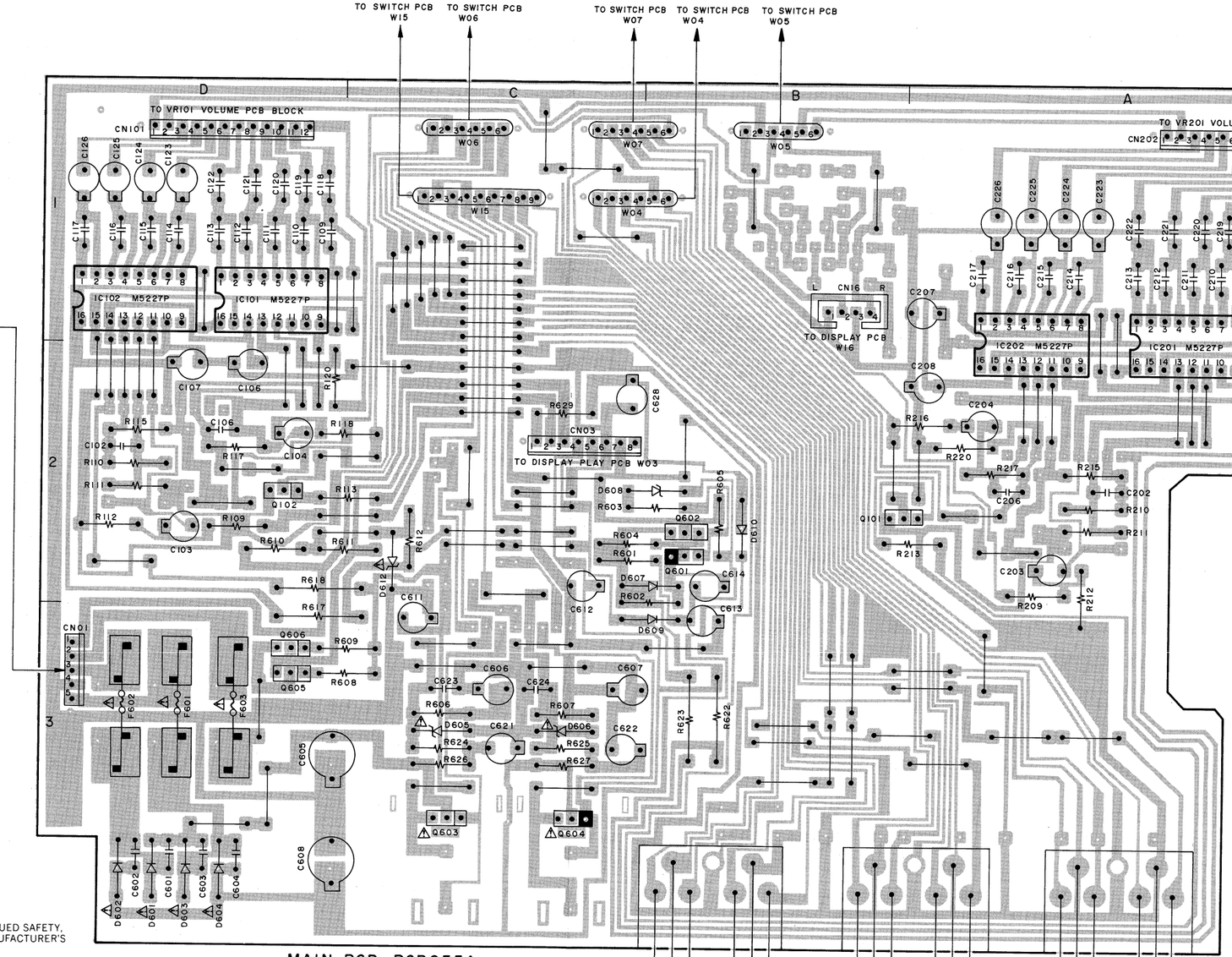
Q501,502 ···· DTC363ES
Q503 ····· 2SC2785



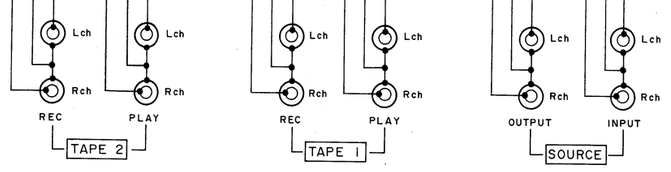
DTC363ES
2SC2785

TRANSFORMER PCB
PCB055D





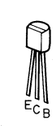
MAIN PCB PCB055A



LOCATION OF COMPONENTS
IC101 ···· D1
IC102 ···· D1
IC201 ···· A1
IC202 ···· A1
Q101 ····· A2
Q102 ····· D2
Q601 ····· B2
Q602 ····· B2
Q603 ····· C3
Q604 ····· C3
Q605 ····· D3
Q606 ····· D3

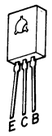
WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT



2SC2878

2SA1175
2SC2785
2SD1020



2SD612K
2SB632K

= PNP TRANSISTOR

= NPN TRANSISTOR

Q101,102 ···· 2SC2878
Q601 ····· 2SA1175
Q602 ····· 2SC2785
Q603 ····· 2SD612K
Q604 ····· 2SB632K
Q605,606 ··· 2SD1020

EA-M719

MAIN PCB PCB055A

02

INPUT SOURCE

OUTPUT

PLAY TAPE I

REC

PLAY TAPE I

REC

IC102 M5227P

IC101 M5227P

IC201 M5227P

IC202 M5227P

VOL DOWN

VOL UP

VR101

VR201

VOLUME PCB BLK

VOLUME PCB BLK

DISPLAY PCB055B

03

IC301 to 303 M5228P

IC401 to 403 M5228P

FULL

500Hz

8kHz

63Hz

1kHz

250Hz

4kHz

125Hz

2kHz

16kHz

IC503 LC4016

IC504 LC4016

IC505 LC4016

IC506 LC4016

IC507 LC4016

IC501 M4069

IC502 M4017

IC508 HA12019

IC509 LB1294

IC510 LB1294

IC511 HA12019

LEVEL SHIFTOR

OFFSET CORRECTOR

CONSTANT CURRENT GENERATOR

D501 GZAIIX or MTZIIA

Q501 DTC363ES

Q502 DTC363ES

Q503 2SC2785

Q101 2SC2878

Q102 2SC2878

F.RANGE

dB

63

125

250

500

1k

2k

4k

8k

16k

TRUTH TABLE

INPUT			OUTPUT
CP	$\overline{CE}$	CL	OUTPUT TERMINAL BECOMING "H"
X	X	H	Q0
X	H	L	Qn
L	X	L	
↑	L	L	Qn+1 CUNT OPERATION
↑	H	L	Qn
↑	X	L	
X	↑	L	
L	↑	L	
H	↑	L	Qn+1 CUNT OPERATION

※ INDICATED VOLTAGES ARE MEASURED WITH DIGITAL DC VOLTMETER.

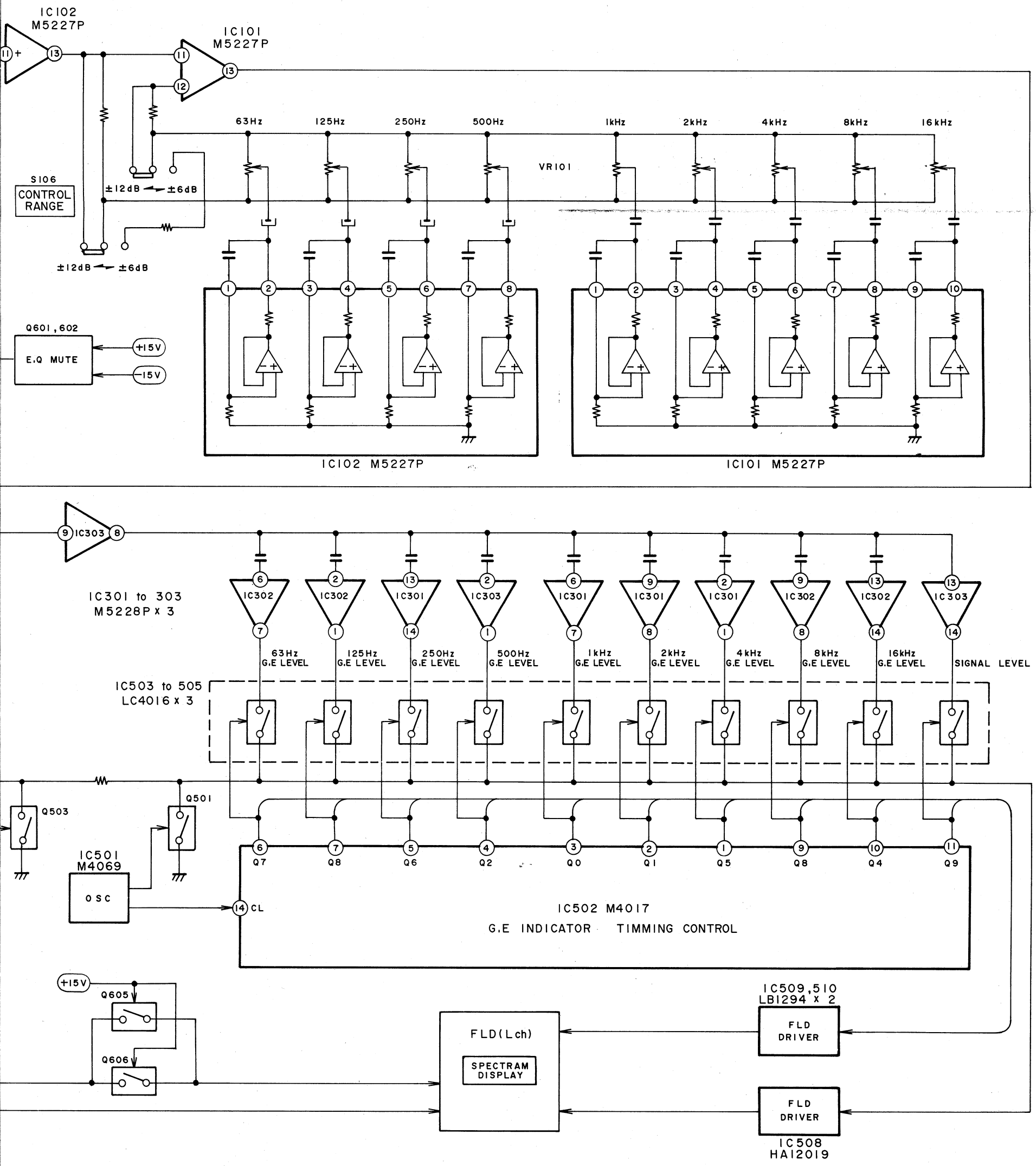
NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W(J)
ALL CAPACITORS IN μF 50WV(J)
POWER TRANSFORMER IS DIFFERENT
ACCORDING TO AREA

WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS.
FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS
ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.

EA-M719
SCHEMATIC DIAGRAM

EA-M719

SOURCE INPUT Lch
ON OFF
S105
SOURCE
TAPE 1 PLAY Lch
ON OFF
S103
TAPE 1
TAPE 2 PLAY Lch
ON OFF
S104
TAPE 2
SOURCE OUTPUT Lch
TAPE 1
S103
ON OFF
TAPE 1 REC Lch
TAPE 2
S104
ON OFF
TAPE 2 REC Lch
OFF ON
S107
G.E REC
OFF ON
S108
EQUALIZER
G.E REC
S107
OFF ON
OFF ON
S101
POWER
ON OFF
S102
DISPLAY
IC102
M5227P
IC101
M5227P
63Hz
S106
CONTROL RANGE
±12dB ±6dB
±12dB ±6dB
Q101
Q601, 602
E.Q MUTE
+15V
-15V
IC303
IC303
IC301 to 303
M5228P x 3
IC302
63Hz
G.E LEVEL
IC503 to 505
LC4016 x 3
D601 to 604
RECTIFIER
AC
Q603
+15V REG.
+15V
S101
POWER
ON OFF
-15V REG.
-15V
Q604
Q503
Q501
IC501
M4069
OSC
Q7
CL
POWER
SOURCE
TAPE 2
TAPE 1
OFF S105 SOURCE ON
OFF S104 TAPE 2 ON
OFF S105 SOURCE ON
±6dB
±12dB
S106
CONTROL RANGE
G.E REC
EQUALIZER
OFF S107 G.E REC ON
OFF S108 EQUALIZER ON
Q605
Q606
AC



EA-M719
BLOCK DIAGRAM
NO. 870307A (A2)